

AMENDMENTS TO THE CLAIMS

Please cancel Claims 12, 14, 21, 22, 24 and 26-31 and amend Claims 13, 15, 17, 23 and 25 as follows,

FAX RECEIVED

APR 06 2004

GROUP 3700

LISTING OF CLAIMS

1.-12. (cancelled)

13. (currently amended) ~~The heat exchanger according to claim 12, wherein:~~

A heat exchanger comprising:

a core portion having a plurality of tubes and a plurality of outer fins made of a first aluminum alloy, the tubes and the outer fins being alternately laminated; and

a tank separately formed from the tubes, the tank into which one end of each of the tubes is inserted, wherein:

each of the tubes is produced by the following method:

uniformly work-hardening a two-layer aluminum alloy plate to form a work-hardened plate, the two-layer aluminum alloy plate having a core made of a second aluminum alloy including manganese and a sacrifice anode layer generally uniformly clad on an entire one side of the core and make of a third aluminum alloy which is electro-chemically base with respect to the second aluminum alloy; and

forming a tube by bending the work-hardened plate so that the sacrifice anode layer is disposed to face a corrosive fluid and the core is disposed to face a non-corrosive fluid; wherein

the core portion further has a brazing material applied on the sacrifice anode layer of the two-layer aluminum alloy plate for brazing the tube and a respective outer pin to each other;

each of the outer fins is corrugated to have a plurality of parallel folds, each of the folds having a flat top through which each of the outer fins is joined to the tubes; and

the brazing material is applied in a substantially straight line to a joint surface between the flat top and the tubes.

FAX RECEIVED

APR 06 2004

GROUP 3700

14. (cancelled)
15. (currently amended) The heat exchanger according to claim [[12]] 13, wherein an inner fin is disposed inside each of the tubes.

16. (cancelled)

17. (currently amended) The heat exchanger according to claim [[12]] 13, wherein:

the non-corrosive fluid is a refrigerant; and

the core evaporates the refrigerant.

18.-22. (cancelled)

23. (currently amended) ~~The heat exchanger according to claim 22, wherein~~
A heat exchanger comprising:

a core portion having a plurality of tubes and a plurality of outer fins made of a first aluminum alloy, the tubes and the outer fins being alternately laminated; and

a tank into which one side ends of the tubes are inserted, wherein:

each of the tubes is formed from a two-layer aluminum alloy plate that has a core made of a second aluminum alloy including manganese and a sacrifice anode layer generally uniformly clad on an entire one side of the core, the sacrifice anode layer being made of a third aluminum alloy that is electro-chemically base with respect to the second aluminum alloy;

the two-layer aluminum alloy plate is bent to construct the tube, such that the sacrifice anode layer faces a corrosive fluid and the core faces a non-corrosive fluid;
and

the core portion further has a brazing material applied on the sacrifice anode layer of the two-layer aluminum alloy plate for brazing the tube and a respective outer fin to each other; wherein:

the outer fins are corrugated fins having a plurality of folds, each of the folds having a flat top through which each of the outer fins is joined to the tubes; and

the brazing material is applied in a substantially straight line to a join surface between the flat tops of the outer fins and the tubes.

24. (cancelled)

25. (currently amended) A heat exchanger comprising:

a core portion having a plurality of tubes and a plurality of outer fins made of a first aluminum alloy, the tubes and the fins being alternately laminated; and

a tank, one end of each tube being inserted into the tank; wherein:

each of the tubes is formed from an aluminum alloy plate having a first layer and a second layer;

the first layer is a core made of a second aluminum alloy including manganese;

the second layer is a sacrifice anode layer generally uniformly clad on an entire one side of the core;

the sacrifice anode layer is made of a third aluminum alloy that is electrochemically base with respect to the second aluminum alloy;

the aluminum alloy plate is bent to construct the tube such that the sacrifice anode layer faces a corrosive fluid and the core faces a non-corrosive fluid; [[and]]

the core portion further has a brazing material on the sacrifice anode layer of the aluminum alloy plate for brazing the tube to a respective outer fin[[.]]:

each of the outer fins is corrugated to have a plurality of parallel folds, each of the folds having a flat top through which each of the outer fins is joined to the tubes; and

the brazing material is applied in a substantially straight line to a joint surface between the flat top and the tubes.

26.-31. (cancelled)